

**GENERAL NOTES**

- CONSULT LOCAL BUILDING OFFICIAL(S) FOR INSTRUCTIONS REGARDING CERTIFICATION OF COMPLETED RETAINING WALL(S). WALLS BEING ENGINEERED STRUCTURES, MAY REQUIRE CERTIFICATION BY A QUALIFIED ENGINEER WHO MUST BE RETAINED PRIOR TO RETAINING CONSTRUCTION OF THE RETAINING WALL SO AS TO BE ABLE TO INSPECT THE CONSTRUCTION OF THE ENTIRE WALL FROM START TO FINISH.
- AD ENGINEERING WILL NOT CERTIFY THE RETAINING WALL UNLESS RETAINED BY THE OWNER TO DO SO, ARE NOTIFIED PRIOR TO CONSTRUCTION OF THE WALL, AND INSPECTIONS ARE CONDUCTED BY AD ENGINEERING STAFF DURING THE WALL CONSTRUCTION.
- IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE LOCATION(S) AND ALIGNMENT(S) OF THE RETAINING WALL(S) IS/ARE PER THE APPROVED GRADING PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO VERIFY DIMENSIONS AND GRADES PRIOR TO CONSTRUCTION.
- IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE CERTIFYING ENGINEER PRIOR TO COMMENCING CONSTRUCTION TO DETERMINE THE QUANTITY AND TYPE OF INSPECTIONS REQUIRED TO ALLOW FOR FINAL CERTIFICATION OF THE RETAINING WALL CONSTRUCTION.
- WALL SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL INSPECTIONS, TESTING AND QUALITY VERIFICATIONS ARE PERFORMED DURING CONSTRUCTION BY QUALIFIED PERSONNEL.
- IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE CONTRACTOR HAS BUDGETED ACCORDINGLY FOR THE INSPECTIONS AND TESTING NECESSARY TO CERTIFY THE CONSTRUCTION OF THE RETAINING WALL(S).
- MINOR ALTERATIONS MAY BE MADE TO THE LAYOUT OF THE WALLS PROVIDED THE MINIMUM BURIED DEPTH IS MAINTAINED, MAXIMUM EXPOSED HEIGHT IS NOT EXCEEDED, AND SLOPES IN THE AREA OF THE WALL(S) ARE WITHIN THE ASSUMED DESIGN PARAMETERS AS PROVIDED BY THE DESIGN CROSS SECTIONS.
- AD ENGINEERING MUST BE NOTIFIED TO PROVIDE THE NECESSARY REVISIONS AND RECOMMENDATIONS FOR ANY PROPOSED ALTERATIONS IF THE MAXIMUM WALL HEIGHT IS TO BE INCREASED, SLOPES BEHIND OR IN FRONT OF THE WALL EXCEED THOSE USED AS THE DESIGN PARAMETER, MINIMUM BURIED DEPTH REQUIREMENTS ARE REDUCED, OR A GUARD, FENCE OR BARRIER IS TO BE ADDED ON OR NEAR THE WALL THAT WAS NOT ACCOUNTED FOR IN THE DESIGN.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION OF THE RETAINING WALLS. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY SUPPORT OR PROTECTION TO ANY EXISTING UTILITIES IN THE AREAS OF THE PROPOSED RETAINING WALLS.

**DESIGN PARAMETERS**

- RETAINING WALLS HAVE BEEN DESIGNED IN ACCORDANCE WITH 2012 ONTARIO BUILDING CODE AND THE DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 2ND EDITION BY THE NATIONAL CONCRETE MASONRY ASSOCIATION.
- ASSUMED SOIL PROPERTIES AREAS LISTED BELOW AND MUST BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO AND DURING CONSTRUCTION OF THE WALL.  
SOIL FRICTION ANGLE = 28°  
UNIT WEIGHT OF SOIL (DRAINED) = 19.0 KN/m<sup>3</sup> (120 pcf)  
ACTIVE PRESSURE COEFFICIENT (external) (K<sub>ae</sub>) = 0.32 (LEVEL BACKSLOPE)
- AD ENGINEERING MUST BE NOTIFIED OF ANY DISCREPANCY BETWEEN DESIGN PARAMETERS AND ACTUAL SITE CONDITIONS.
- RETAINING WALL HAS BEEN CHECKED FOR EXTERNAL AND INTERNAL STABILITY WHEN IT IS STATED ON THESE DRAWINGS THAT A GLOBAL STABILITY ANALYSIS IS RECOMMENDED TO RETAIN A QUALIFIED GEOTECHNICAL CONSULTANT TO CONDUCT THE GLOBAL STABILITY ANALYSIS.

**EXCAVATION NOTES**

- CONTRACTOR IS RESPONSIBLE FOR ENSURING EXCAVATIONS ARE IN ACCORDANCE WITH APPLICABLE OCCUPATIONAL HEALTH AND SAFETY ACT REGULATIONS

**FOUNDATION NOTES**

- RETAINING WALL TO BE USED AGAINST UNDISTURBED NATIVE SOIL UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- THE FOUNDATIONS HAVE BEEN DESIGN FOR AN ASSUMED MINIMUM ALLOWABLE NET BEARING CAPACITY OF 100 kPa (2000 psf), UNLESS NOTED OTHERWISE ON SECTION DRAWINGS. FOUND ALL FOOTINGS IN NATURAL UNDISTURBED INORGANIC SOIL.
- A SOILS CONSULTANT SHALL APPROVE ON SITE THE ASSIGNED SAFE NET BEARING PRESSURE FOR EACH FOOTING IF THE SAFE NET BEARING PRESSURE USED FOR DESIGN IS NOT APPROVED. ENGINEER TO BE NOTIFIED FOR REVISION OF RETAINING WALL DESIGN.
- ALL UNSUITABLE FILL SOILS CONTAINING ORGANICS OR DELETERIOUS MATERIAL OR THAT IS FROZEN, MUST BE SUB EXCAVATED FROM BENEATH THE PROPOSED RETAINING WALL BASE AND SUBSEQUENTLY REPLACED WITH APPROVED STRUCTURAL FILL OR MASS CONCRETE UNDER SUPERVISION OF THE GEOTECHNICAL ENGINEER.
- WHERE A SOIL INVESTIGATION WAS PROVIDED, THE SOIL PARAMETERS LISTED IN THE SOIL INVESTIGATION WERE USED FOR THE WALL DESIGN. WHERE NO SITE SPECIFIC INFORMATION WAS PROVIDED, IT WAS ASSUMED THAT THE FOUNDATION AND RETAINED SOILS CONSIST OF INORGANIC CLAYS WITH LOW TO MEDIUM PLASTICITY.

**CONSTRUCTION NOTES**

- IF THE RETAINING WALLS ARE CONSTRUCTED DURING FREEZING CONDITIONS, ALL FILL MATERIALS MUST BE FREE OF SNOW, ICE AND FROZEN MATERIAL.
- CONTRACTOR IS RESPONSIBLE FOR DRAINAGE CONTROL DURING CONSTRUCTION IN AREAS OF THE PROPOSED RETAINING WALLS.
- FIRST COURSE OF BLOCKS TO BE FOUND ON MINIMUM 150 mm (6") OF COMPACTED OPSS GRANULAR "A" OVER UNDISTURBED NATIVE SOIL UNLESS OTHERWISE NOTED ON DRAWINGS.
- DRAINS ARE TO BE OUTLETTED VIA GRAVITY TO APPROVED LOCATIONS. DRAINS ARE RECOMMENDED TO BE SLOPED AT A MINIMUM OF 1.0% TO THE PROPOSED OUTLET LOCATIONS. DRAINS MUST BE OUTLETTED AT THE ENDS OF THE WALL AND/OR THROUGH THE FACE OF THE WALL AT GROUND SURFACE. IT IS RECOMMENDED THAT A DRAINAGE OUTLET BE PROVIDED EVERY 15m (50 FT).
- THE RETAINING WALL ARE TO BE BACKFILLED AS RETAINING WALL BLOCKS ARE BEING PLACED IN LAYERS NOT EXCEEDING 200mm (8IN) AND COMPACTED TO SPECIFIED DENSITY, AT NO TIME SHOULD THE RETAINING WALL BLOCKS BE HIGHER TWO COURSES ABOVE THE BACKFILL HEIGHT. THE BACKFILL MATERIAL MUST BE AT A SUITABLE MOISTURE CONTENT TO ACHIEVE THE MINIMUM REQUIRED FIELD COMPACTION, COMPACTION LEVELS TO BE VERIFIED BY A GEOTECHNICAL ENGINEER.
- WHERE REQUIRED, INFILL SOIL IS TO BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 200mm (8IN) IN THICKNESS, REQUIRED COMPACTION 98% OF THE STANDARD PROCTOR DENSITY OF THE MATERIAL.
- GEOTECHNICAL DESIGN STRATAGRID 200 (OR APPROVED ALTERNATIVE) - 1.250 LBS/FT TYP. MACHINE DIRECTION DESIGN STRENGTH, NO MORE THAN TWO COURSES BETWEEN LAYERS OF GEOGRID. GRID SHOULD BE EMBEDDED A MINIMUM OF 18" INTO THE WALL, OR
- HEAVY COMPACTION AND CONSTRUCTION EQUIPMENT ARE NOT ALLOWED TO BE WITHIN 1.5 M (5 FT) OF THE BACK SIDE OF THE RETAINING WALL.
- GRADE AT TOP AND BOTTOM OF WALLS IS AS NOTED ON DRAWINGS
- THE TOP AND BOTTOM OF THE WALL MUST BE STABILIZED (TOP SOILED AND SEEDED, OR AS SPECIFIED IN THE DRAWINGS) IMMEDIATELY UPON COMPLETION OF THE WALL, OR PROVIDED WITH EQUIVALENT EROSION PROTECTION.

**GUARDS, FENCES AND BARRIERS**

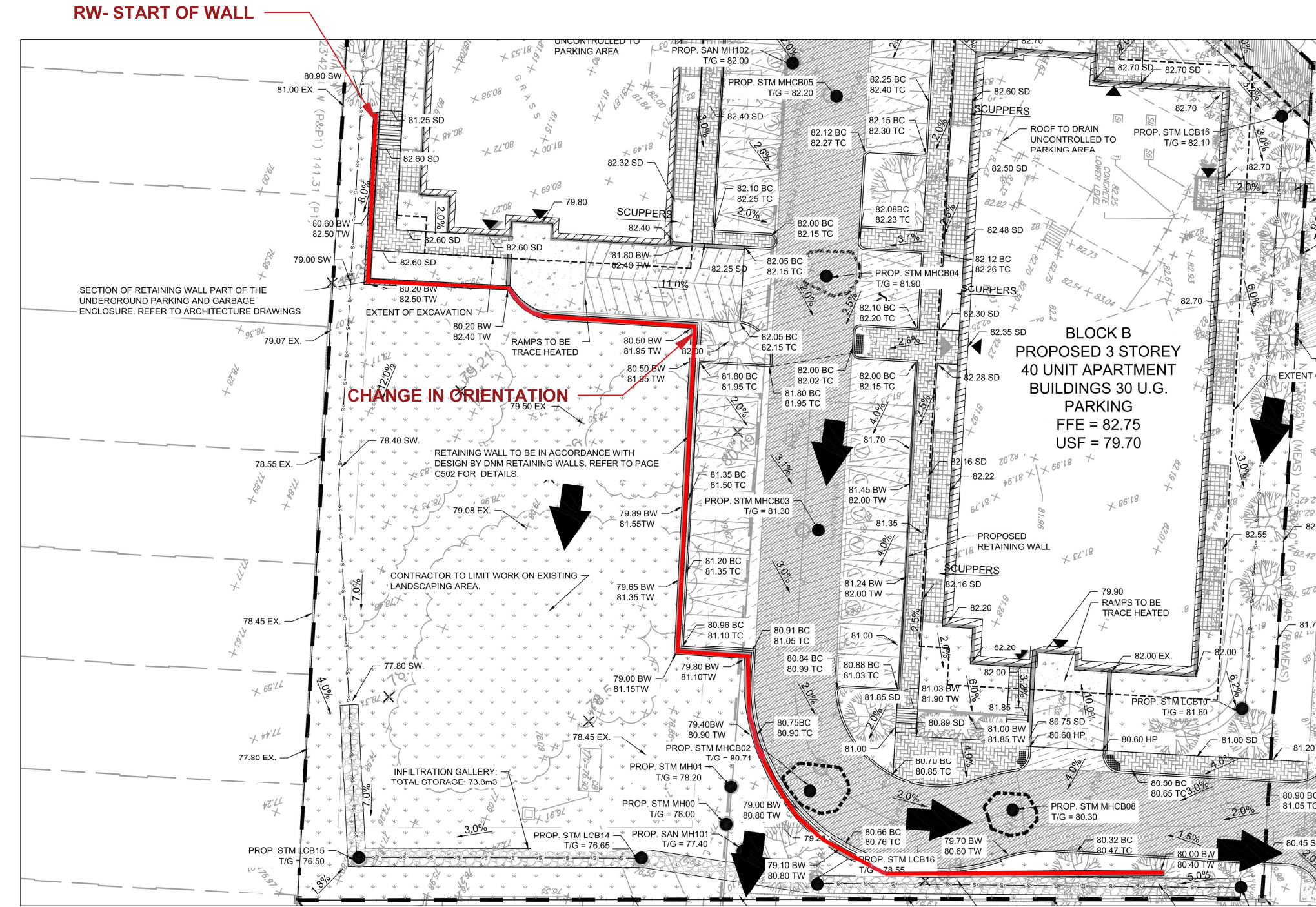
- CONTACT LOCAL MUNICIPALITY FOR GUARDRAIL REQUIREMENTS, IF REQUIRED. PROVIDE GUARDRAIL IN ACCORDANCE WITH 2012 O.B.C. REGULATIONS. NOTIFY AD ENGINEERING FOR APPROPRIATE CONNECTION TO TOP OF WALL IF GUARD IS TO BE PLACED IN WALL.
- WHERE FENCES ARE TO BE INSTALLED ON OR NEAR THE RETAINING WALLS, DESIGN (WILL BE SHOWN ON THE DESIGN DRAWINGS) AND THAT THE TYPE (CHAIN LINK, PRIVACY, OR NOISE), DIMENSIONS AND POST SPACING OF THE FENCE IS AS SPECIFIED.
- WHERE FENCES OR TRAFFIC BARRIERS ARE TO BE INSTALLED NEAR THE BACK OF THE RETAINING WALL, VERIFY THE FENCE OR BARRIER WAS ACCOUNTED FOR IN THE WALL DESIGN (WILL BE SHOWN ON THE DESIGN DRAWINGS) AND THAT THE SONO TUBES ARE INSTALLED DURING WALL CONSTRUCTION. CORE DRILLING OF HOLES POST WALL CONSTRUCTION IS NOT PERMITTED IN GEOGRID REINFORCED WALL INSTALLATIONS.

**IMPORTANT NOTE:**

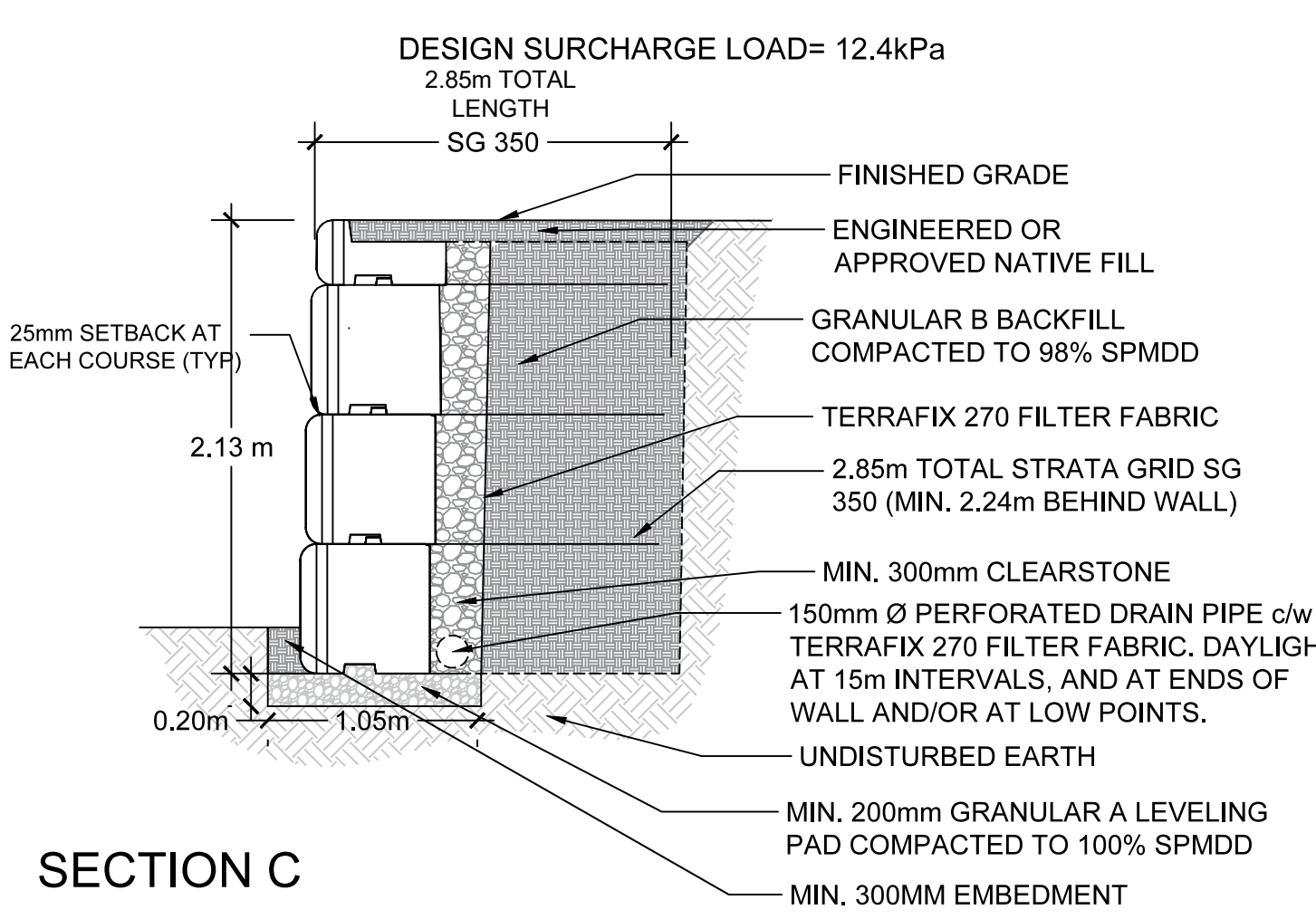
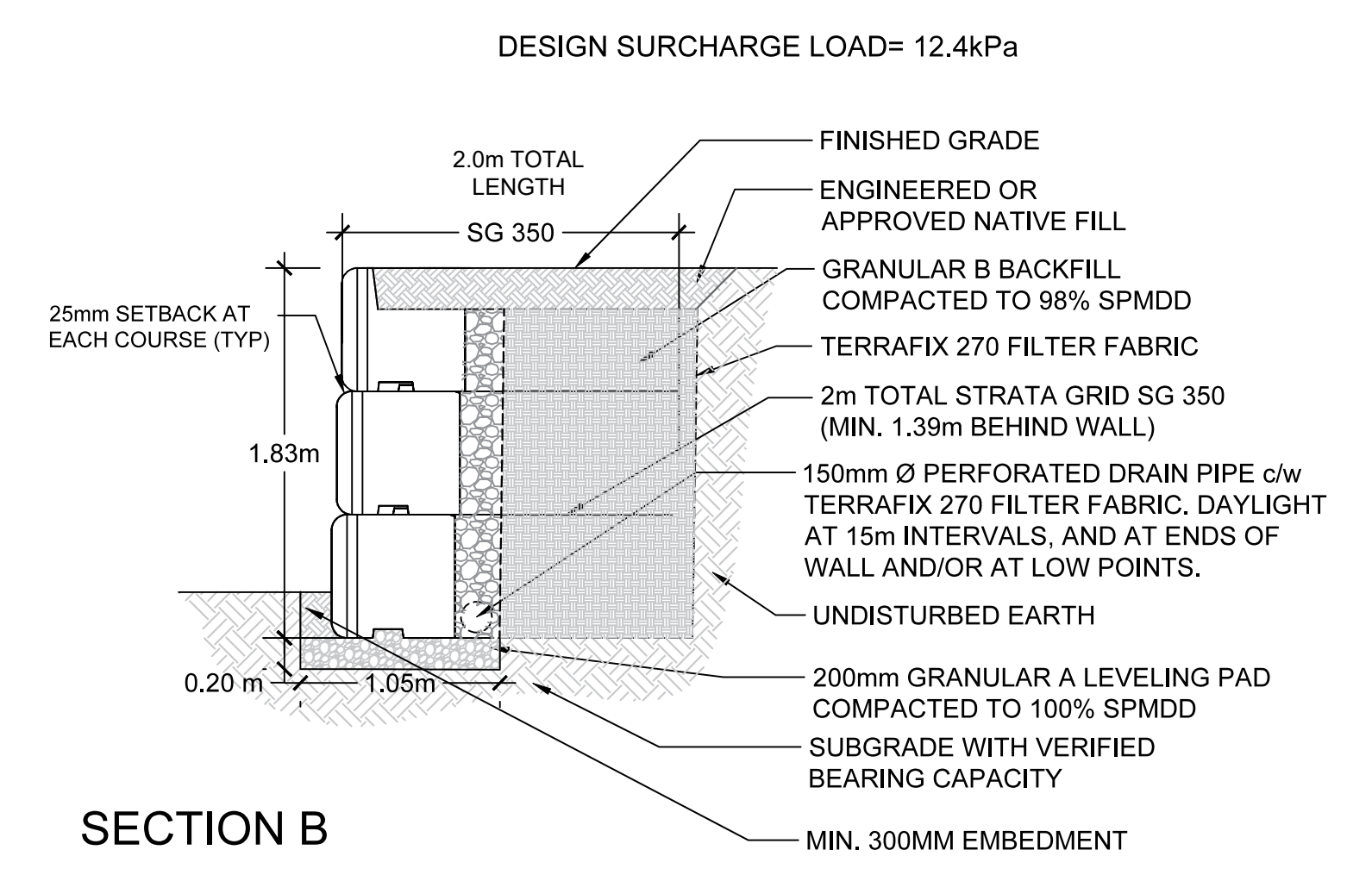
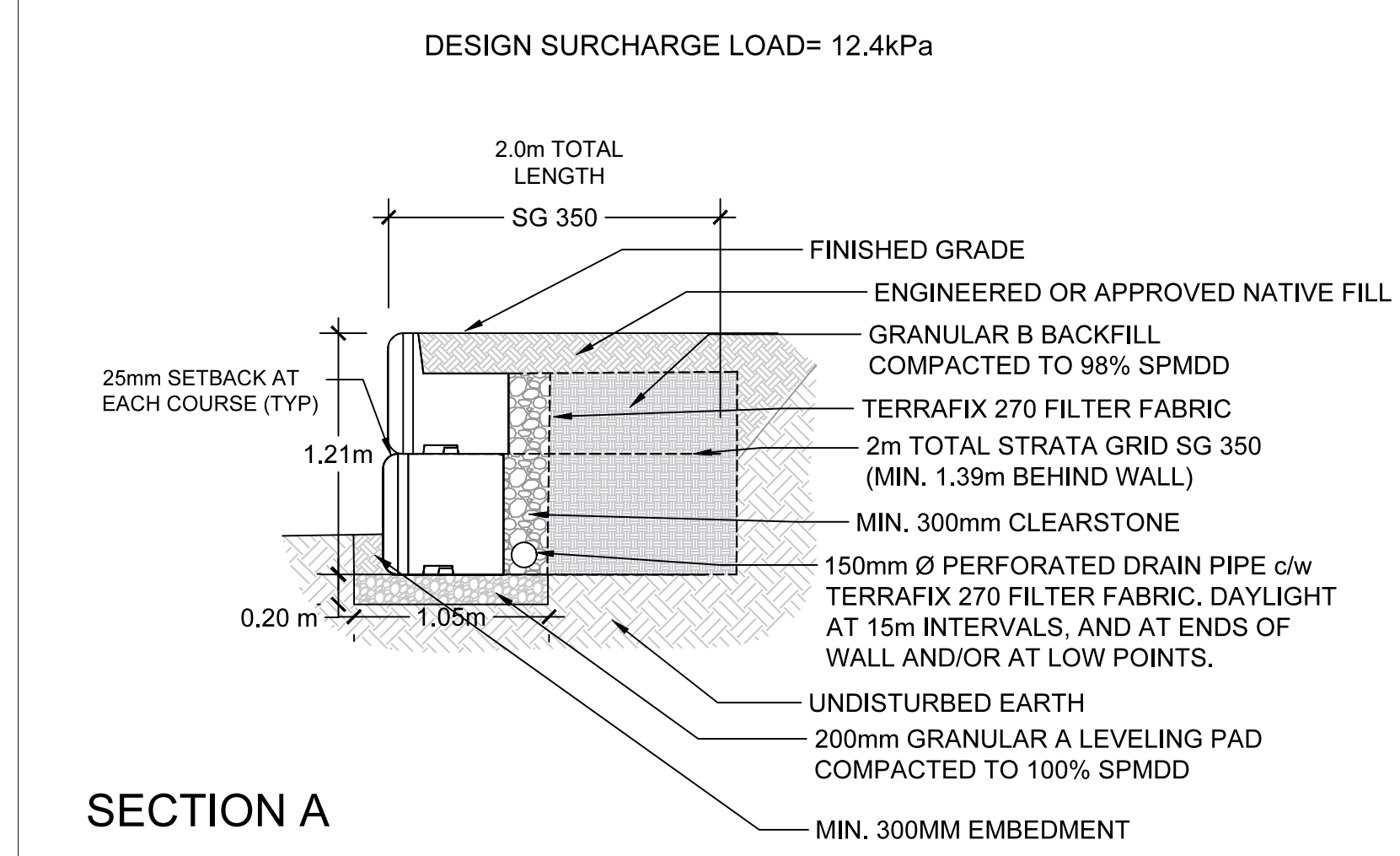
WALL DESIGN PROVIDED IN THIS DRAWING SET, ARE BASED ON DOCUMENTATION AND INFORMATION PROVIDED TO DESIGN ENGINEER AT TIME OF DRAWING DATE. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DRAWING INFORMATION TO CONFIRM THAT THE INFORMATION AND WALL DESIGN SHOWN MATCH THE MOST RECENT GRADING AND SITE INFORMATION AVAILABLE.

**DNM Stone Terra™ PRELIMINARY BLOCK COUNT**

12" BENCH	12" B	6
FULL BENCH	B	89
HALF BENCH	HB	4
LEFT BENCH	LCB	1
RIGHT BENCH	RCB	1
FULL KEYED	K	277
HALF KEYED	HK	9
LEFT KEYED	LCK	4
RIGHT KEYED	RCK	3
SG350 - 5 ROLLS		



FOR LOCATION PURPOSE ONLY



**KEYPLAN**

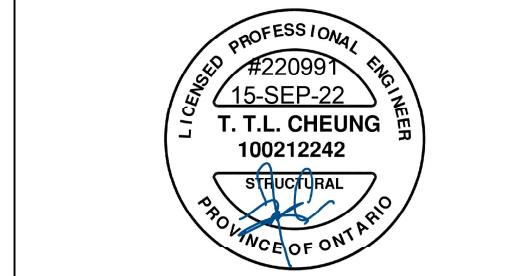
NO.	DATE	DESCRIPTION
R1	2024-09-08	ISSUED FOR APPROVALS
R0	2024-01-25	ISSUED FOR APPROVALS

**REVISIONS/ISSUED**

THIS DRAWING IS ON LOAN ONLY, NOT TO BE COPIED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS APPROVED. ALL WORK IS TO BE DONE IN ACCORDANCE WITH CURRENT O.B.C. AND ALL AUTHORITIES HAVING JURISDICTION. DO NOT SCALE THE DRAWINGS. ALL DIMENSIONS, DRAWINGS AND DOCUMENTS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCY MUST BE COMMUNICATED TO THE ENGINEER.

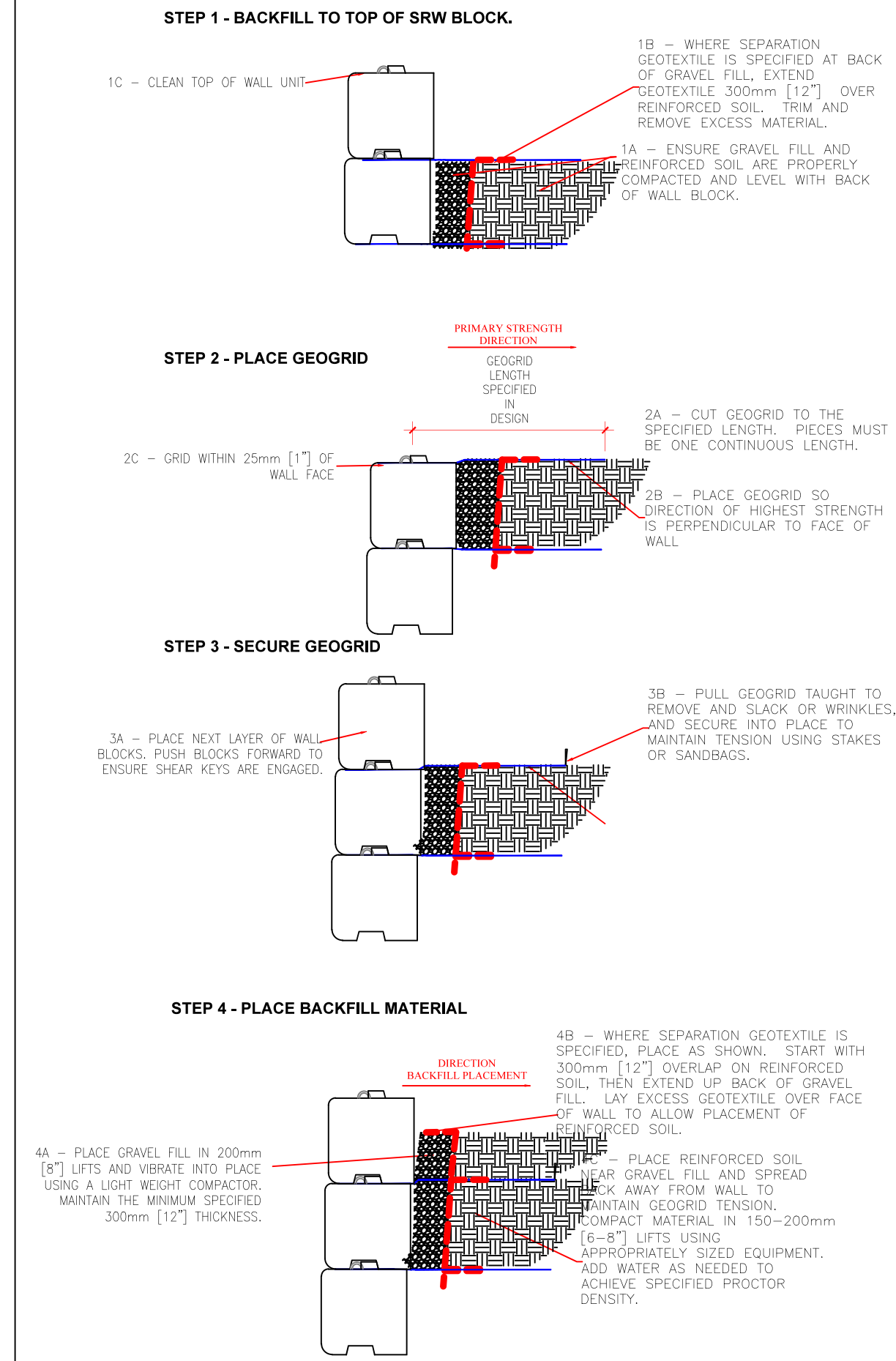
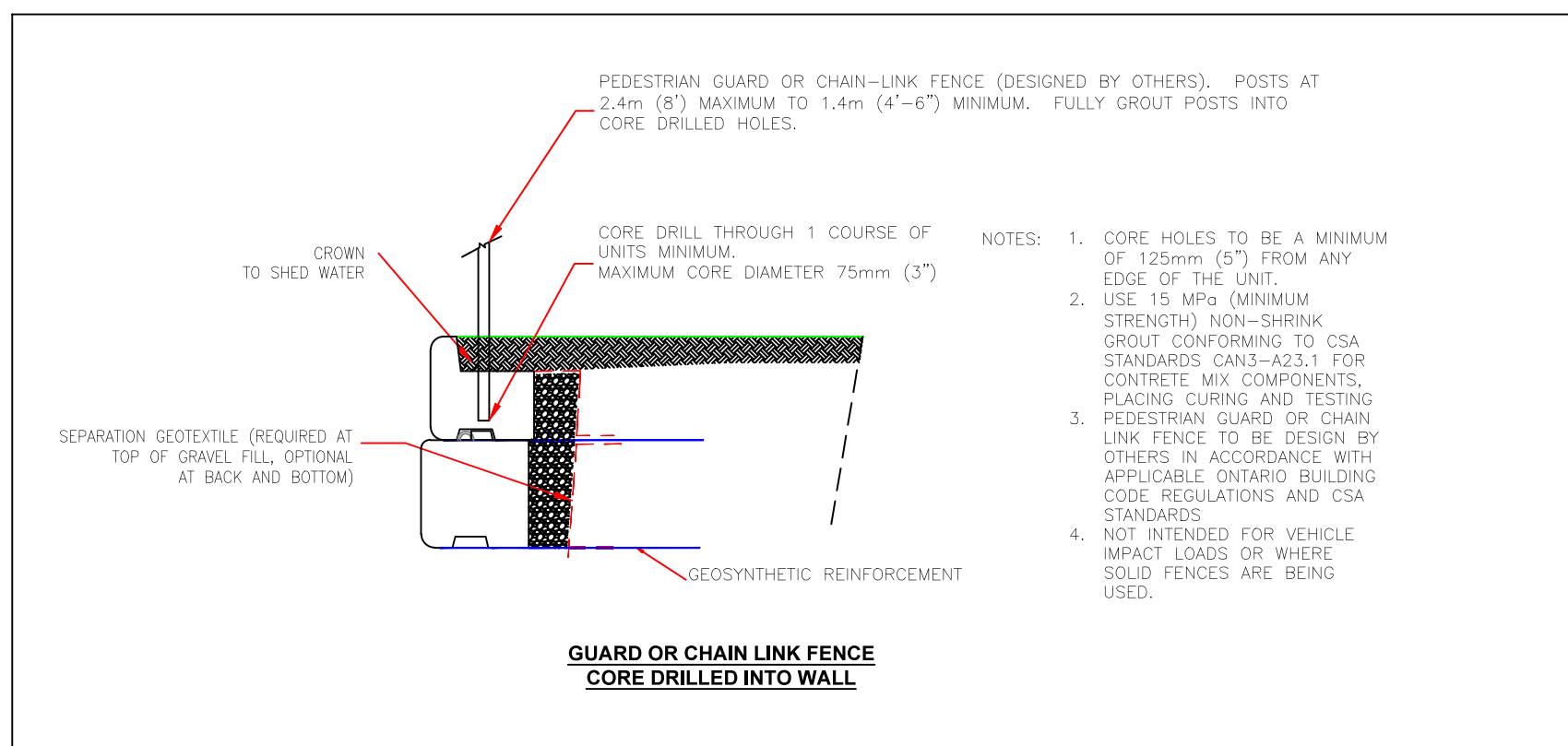
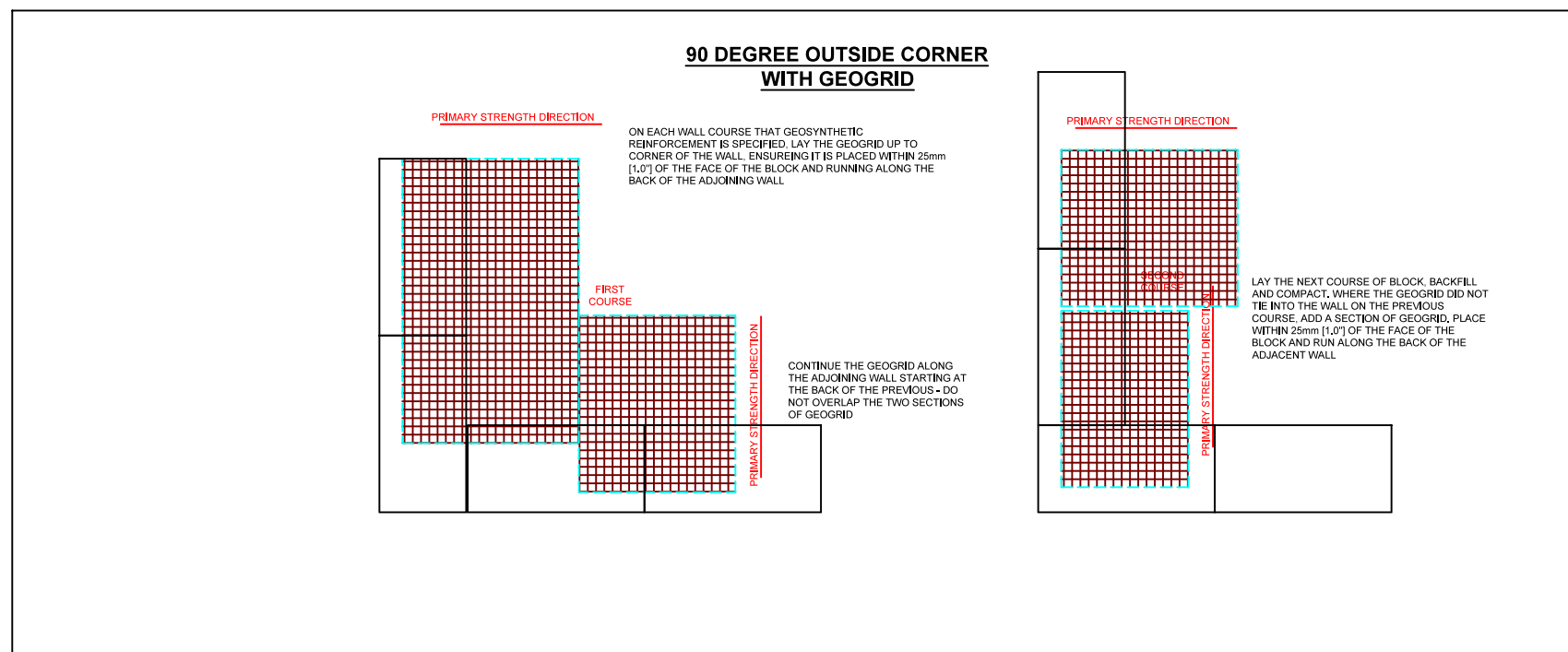
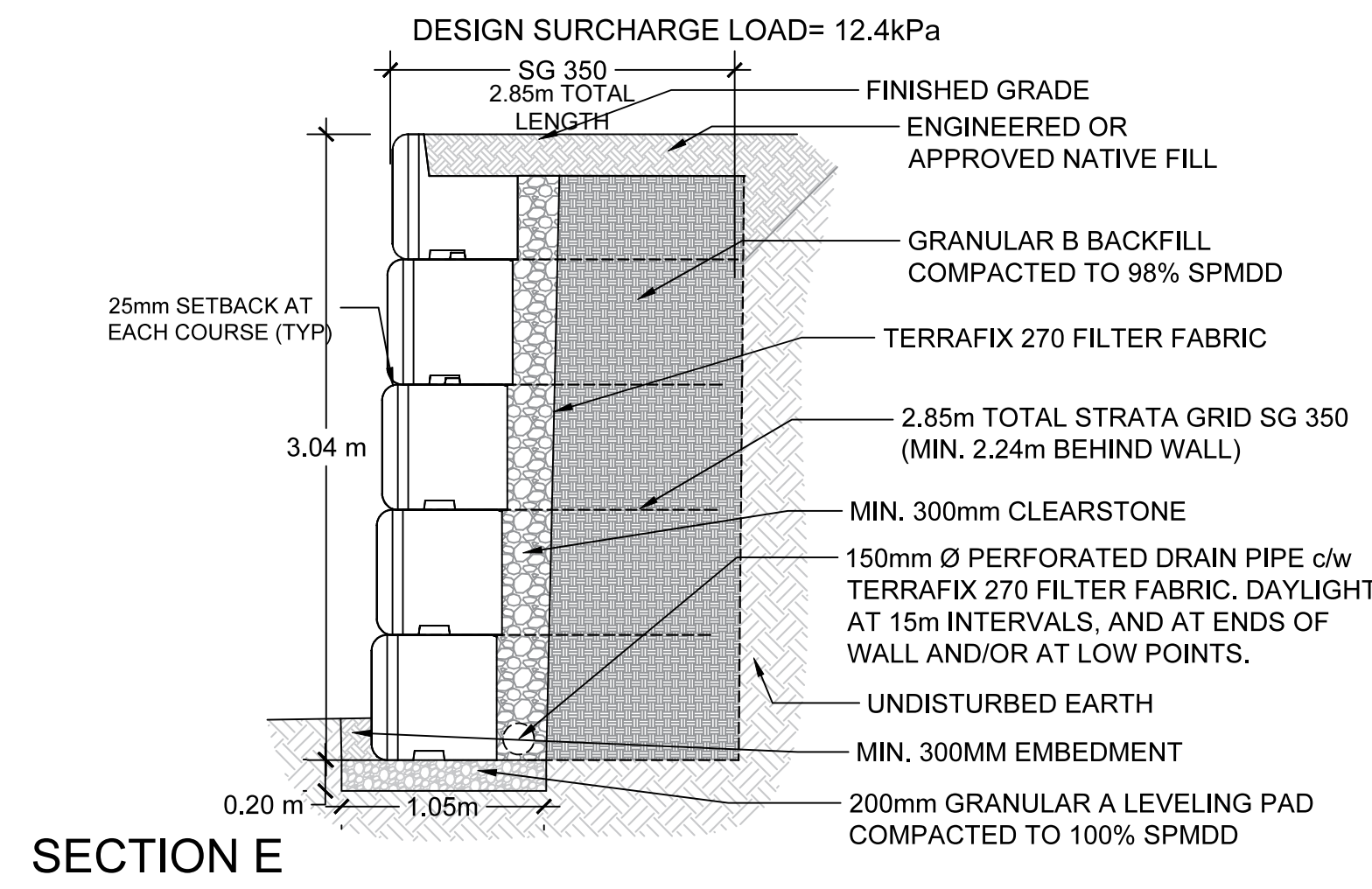
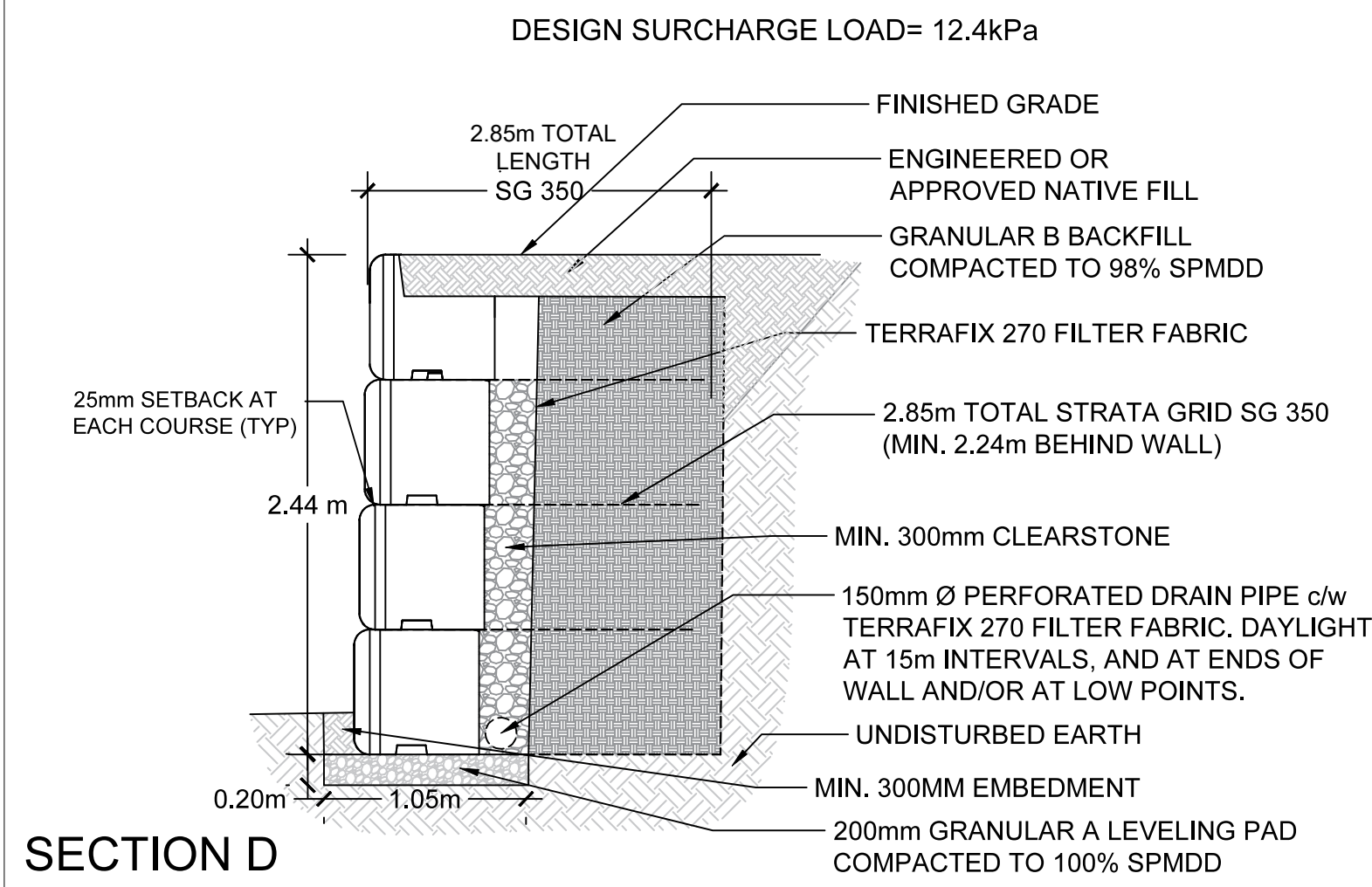
THE CLIENT EXPRESSLY AGREES THAT EMPLOYEES, STAMPING ENGINEERS AND PRINCIPALS SHALL HAVE NO PERSONAL LIABILITY TO THE CLIENT IN RESPECT OF A CLAIM, WHETHER IN CONTRACT, TORT AND/OR ANY OTHER CAUSE OF ACTION IN LAW. ACCORDINGLY, THE CLIENT EXPRESSLY AGREES THAT IT WILL BRING NO PROCEEDINGS AND TAKE NO ACTION IN ANY COURT OF LAW AGAINST EMPLOYEES, STAMPING ENGINEERS OR PRINCIPALS IN THEIR PERSONAL CAPACITY.

THE INFORMATION ON THIS DRAWING SHALL NOT BE USED FOR ANY OTHER PROJECT OR WORKS. THE INFORMATION ON THESE DRAWINGS APPLIES ONLY TO THIS PROJECT. RETAINING WALL ENGINEER WILL TAKE NO RESPONSIBILITY FOR ANY CHANGES TO OR OMISSIONS FROM THIS DRAWINGS UNLESS APPROVED IN WRITING.



**DNM Retaining Wall Systems Ltd**  
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Cannon St E  
Hamilton, On L8L 0A8  
Phone: (905)-864-9808

PROJECT:	2380-2896 CLEROUX BY BRIDOR DEVELOPMENTS
LOCATION:	996-B ST. AUGUSTIN RD. EMBRUN, ON
DRAWING DESCRIPTION:	ELEVATION, CROSS SECTIONS, & LAYOUT
REFERENCE FILE:	BASED ON INFORMATION FOUND ON: GRADING PLAN 20-035-C200 DRAWN BY: BF+GB/DATE 02-2021
DRAWN BY:	DS
CHECKED BY:	TC
DATE STARTED:	2021-02-26
PROJECT NO.:	EST13406
SHEET NO.:	1



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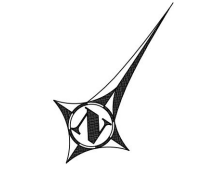
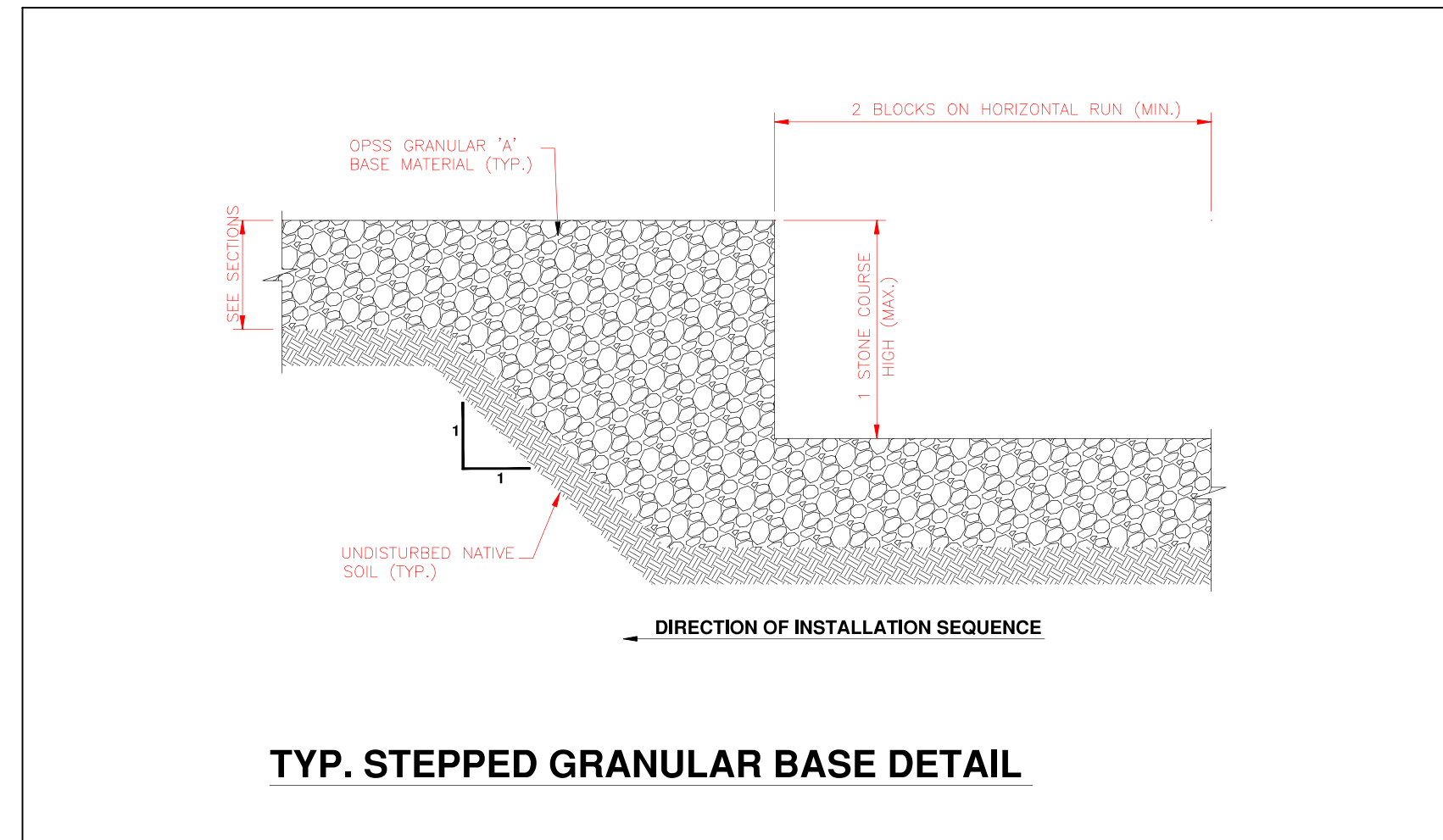
1. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. CARE MUST BE TAKEN TO ENSURE GEOGRID IS NOT DAMAGED DURING CONSTRUCTION OR SUBJECT TO UV EXPOSURE.

**DESIGN**

2. MINIMUM GEOGRID LENGTH IS 60% OF THE TOTAL WALL HEIGHT BUT NEVER LESS THAN 1.2m [4'].
3. GEOGRID LENGTH, PLACEMENT AND TYPE SHALL BE INDICATED ON THE WALL DESIGN.

**INSTALLATION**

4. ADJACENT SECTIONS OF GEOGRID SHALL ABUT EACH OTHER, NOT OVERLAP.
5. DO NOT PLACE MORE THAN TWO (2) COURSES OF WALL BLOCK PRIOR TO BACKFILLING THE WALL.
6. AGGREGATE MATERIAL SHOULD BE DUMPED CLOSE TO THE WALL AND RAKED AWAY FROM THE WALL TO MAINTAIN TENSION IN THE GEOGRID DURING BACKFILLING.
7. WHEN AGGREGATE MATERIAL IS SPREAD, CAUTION MUST BE USED TO ENSURE HAND EQUIPMENT (SHOVELS, RAKES) DOES NOT CONTACT THE GEOGRID OR CAUSE DAMAGE.
8. DO NOT ALLOW ANY TRACKED EQUIPMENT DIRECTLY ON TOP OF THE GEOGRID. FOR NECESSARY TRAVEL ON THE GEOGRID, USE ONLY LIGHTWEIGHT RUBBER Tired EQUIPMENT OPERATING AT LOW SPEEDS (LESS THAN 10MPH); DO NOT ALLOW SHARP BRAKING OR TURNING.
9. ONLY HAND OPERATED EQUIPMENT SHOULD BE USED WITHIN 1m [3'] OF THE BACK OF WALL. BACKFILL THICKNESS MAY NEED TO BE REDUCED IN THESE AREAS TO ENSURE PROPER COMPACTION OF THE REINFORCED SOIL.



**KEYPLAN**

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R1	2022-09-08	ISSUED FOR APPROVALS
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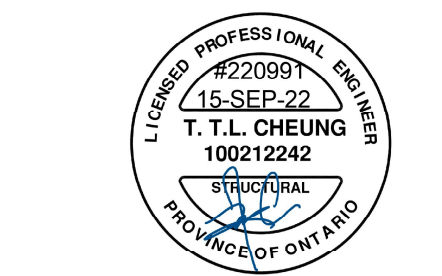
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**DRAWN BY:** DS      **CHECKED BY:** TC

**DATE STARTED:**  
 2021-02-26

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